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(54) Title: ELECTROCHEMICAL CELL

(57) Abstract: An electrochemical cell comprising a cathode, an anode and an electrolyte is provide, wherein: the cathode comprises mesoporous nickel having a periodic arrangement of substantially uniformly sized pores of cross-section of the order of 10-8 to 10-9 m; and the anode comprises a mesoporous material having a periodic arrangement of substantially uniformly sized pores of cross-section of the order of 10-8 to 10-9 m and selected from: carbon, cadmium, iron, a palladium/nickel alloy, an iron/titanium alloy, palladium or a mixed metal hydride.

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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H01M4/80 H01M4/66 H01M4/04 H01M4/32 H01M4/48 C25D3/16 C25D3/02 According to International Patent Classification (IPC) or to both national classification and IPC B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) H01M C25D IPC 7 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the International search (name of data base and where practical search terms used) EPO-Internal, INSPEC, COMPENDEX, WPI Data C. DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document with indication where appropriate of the relevant passages Relevant to daim No. Α EP 1 115 130 A (KANEBO LTD) 1-11 11 July 2001 (2001-07-11) paragraphs '0042!, '0043!; claims 1,13,14; figure 8; examples 1,5,6 NELSON P A ET AL: "MESOPOROUS A 1-11 NICKEL/NICKEL OXIDE ELECTRODES FOR HIGH POWER APPLICATIONS' JOURNAL OF NEW MATERIALS FOR ELECTROCHEMICAL SYSTEMS, ECOLE POLYTECHNIQUE DE MONTREAL, MONTREAL, CA, vol. 5, no. 1, January 2002 (2002-01), pages 63-65, XP001046009 ISSN: 1480--2422 cited in the application the whole document Further documents are listed in the continuation of box C. X Patent family members are listed in annex Special categories of cited documents: "I" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "A" document delining the general state of the art which is not considered to be of particular relevance *E* earlier document but published on or after the international filing date "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone 'I.' document which may throw doubts on priority claim(s) or which is clied to establish the publication date of another citation or other special reason (as specified) "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "O" document referring to an oral disclosure use, exhibition or other means P* document published prior to the international filing date but tater than the priority date claimed "&" document member of the same patent family Date of the actual completion of the international search Date of mailing of the international search report 19 November 2004 06/12/2004 Name and malling address of the ISA Authorized officer European Patient Office P.B 5818 Patentiaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx 31 651 epo nl Fax. (+31-70) 340-3016 Lilimpakis, E

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